

In the claims:

On page 9, cancel line 1, and substitute the following left-hand justified heading therefor:

We Claim as Our Invention:

5 Please cancel claims 1-14, without prejudice, and substitute the following claims therefor:

15. A method for synchronization of a receiver with a transmission signal in an information transmission system, the method comprising the steps of:

providing at least two physical channels operable in parallel for receiving and 10 processing the transmission signal;

15 performing a correlation evaluation of the transmission signal at each physical channel; and

linking the correlation evaluation associated with each of the physical channels for indicating time synchronization of the transmission signal with the receiver.

15. The method as claimed in Claim 15, wherein the information transmission system comprises a mobile radio system.

20. The method as claimed in Claim 15, wherein at least one of the physical channels used for time synchronization is associated with a purpose other than time synchronization in accordance with a transmission protocol in connection with the information transmission system.

25. The method as claimed in Claim 17, wherein the at least one physical channel comprises a transmission signal sequence at least a portion of which is known.

19. The method as claimed in Claim 17, wherein the at least one physical channel comprises a monitoring or data channel in the information transmission system.

30. The method as claimed in Claim 17, wherein the at least one physical channel comprises a synchronization channel for a higher-level frame structure.

21. The method as claimed in Claim 17, wherein the at least one physical channel comprises a secondary synchronization channel that includes known code words formed by modulation with Hadamard sequences such that the correlation evaluation of the secondary synchronization channel is performed via a fast Hadamard transformation.

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22. The method as claimed in Claim 15, wherein the information transmission system comprises a transmission protocol that does not include a fixed relationship between the physical channels such that the correlation evaluations associated with each physical channel are linked by incoherent accumulation.

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23. The method as claimed in Claim 15, wherein the information transmission system comprises a transmission protocol that includes a fixed or defined phase relationship between the physical channels for transmission via a common antenna such that the correlation evaluations associated with each physical channel are linked by coherent accumulation.

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24. The method as claimed in Claim 15, wherein the correlation evaluations associated with each physical channel are stored and subsequently processed via frame synchronization.

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25. The method as claimed in Claim 15, wherein time synchronization occurs when a predetermined condition is met that is defined by overshooting or undershooting a threshold value associated with a parameter including a signal amplitude or bit error rate which identifies the capability to evaluate the transmission signal when the correlation evaluation is performed.

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26. The method as claimed in Claim 15, wherein the correlation evaluations of the physical channels, prior to linking, are weighted as a function of a parameter including signal amplitude or bit error rate which identifies the capability to evaluate the transmission signal corresponding to each physical channel.

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27. An apparatus for synchronization of a receiver with a transmitter in an information transmission system, comprising:

at least two physical channels operable in parallel for receiving and processing a transmission signal from the transmitter;

5 at least one correlation unit associated with the physical channels for performing a correlation evaluation of the transmission signal on a channel-by-channel basis; and

a calculation unit that links the correlation evaluations derived from the correlation stages for calculating a time synchronization indicator.

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28. The apparatus as claimed in Claim 27, wherein the information transmission system comprises a mobile radio system.

29. The apparatus as claimed in Claim 27, wherein the physical channels include a primary synchronization channel for frame or symbol synchronization and a secondary synchronization channel for synchronization to a higher-level frame structure and/or for identification of parameters including a scrambling code group including one or more differently known code words.

15 30. The apparatus as claimed in Claim 27, wherein the apparatus further comprises an evaluation unit that is connected to the calculation unit for subsequent processing of the transmission signal, and a maximum detector which is connected to the evaluation unit.

20 31. The apparatus as claimed in Claim 27, wherein the calculation unit performs coherent or incoherent accumulation of output signals derived from the correlation units.